

CONSUMERS' PREFERENCE FOR COMMON EXOTIC VEGETABLES IN OYO AND KANO STATE, NIGERIA

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ABSTRACT

The study assessed consumers' preference for common exotic vegetables (*cabbage, cucumber, watermelon, lettuce and spring onion*) among consumers in Oyo and Kano State, Nigeria. A random sampling technique was used to collect primary data on consumers' characteristics, preference for the vegetables and budget share on the vegetables. Data collected were analyzed through the use of frequency distribution, percentages and linear regression model. The results showed that most of the respondents in Oyo State were females (53.3%) while most respondents in Kano State were male (85%). Most of the respondents were within 31-40 years with a monthly income of ₦ 21,000 - 40,000. The consumers cut across occupational groups and educational levels. Although 81% had higher education and majorities are married (69%). The preference for the vegetables were in the order watermelon > cabbage>cucumber>lettuce>spring onion in Oyo State. In Kano State, the preference were in the order lettuce >watermelon>cabbage>cucumber>spring onion. The result of the regression analysis showed that age and occupational level of respondents were the factors affecting the budget share on these vegetables in Oyo State ($P < 0.05$). The budget share on the consumption of these vegetables was not influenced by any socioeconomic factors in Kano State ($P > 0.05$). It is recommended that awareness should be created on the nutritional importance of these other vegetables; as this will enhance the consumption of the vegetables with more farmers encouraged into the production.

KEY WORDS: Consumers Preference, Awareness, exotic vegetables, Oyo and Kano State

INTRODUCTION

Vegetables are rich sources of many essential micronutrients, including vitamins C and K, folate, thiamine, carotenes, several minerals, and dietary fiber (Ihekoronye and Ngoddy, (1985), FAO, (1994), Shiundu, (2002), Clay, *et al*, (2005). Vegetables are the most sustainable and affordable dietary sources of micronutrients (AVRDC, 2004). The fibre of vegetables content has been reported to have beneficial effects on blood cholesterol and aids in the prevention of large bowel diseases, while in diabetic subjects, they improve glucose tolerance (IFT, 1990). Vegetables also play key role in neutralizing the acids produced during food digestion because of the fibre content and roughages which promote digestion and helps in preventing constipation (Rai and Yadav, 2005). According to Nandi and Bhattacharjee (2005), Goldberg (2003); Hyson (2002); Prior and Cao (2000), diets high in vegetables and fruits contribute to anti oxidants which are associated with a reduced cancer and cardiovascular risk. It has been reported that two billion persons suffer from malnutrition due to inadequate consumption of vegetables (AVRDC, 2004). The FAO/WHO Expert Consultation on Diet, Nutrition and the Prevention of Chronic Diseases held in 2002 recommended a daily intake of at least 400 g/person/day (146 kg/person/year) of fruit and vegetables. World Health Organization (WHO) places low fruit and vegetable intake sixth among 20 risk factors for global human mortality, just behind such better known killers as tobacco use and high cholesterol (FAO, 2006).

Worldwide production of vegetables has risen at an impressive rate of 4.97% per year (FAO, 2004). Vegetable production provides more jobs compared to cereal production per hectare of production (Gardner and Halweil, 2000). According to Weinberger (2002), a strong vegetable sector is an engine for economic growth. The level of vegetable consumption in Nigeria is rising annually owing to greater appreciation of their food values (Haruna, 2003). It has been reported by Ezedinma and Chukuezi (1999) that exotic vegetables such as lettuce, cabbage, watermelon, cucumber and spring onion attract higher unit prices whilst traditional vegetables such as green amaranths, water leaf, and Jew's mallow are produced in relatively large quantities to meet local markets demand but attract lower unit price. Oguntola (2006), also reported that the production of water melon is receiving prominence in consumption in Nigeria towns and cities.

Fruit and vegetable consumers are influenced by the availability, desirability and accessibility of the produce (Clay *et al*, 2005). Consumer preference is an indicator of how much of a product consumers are willing to

purchase, and is a function of income, relative prices and consumer priorities, preferences and choices. Identification of customer needs and desires constitute a critical aspect of marketing. Taste and perception have varying degrees of importance to different consumers. Convenience, that is the time and ease of preparation and consumption, is a significant factor as consumers want products that fit into busy lifestyles. Producing the same horticultural produce will not necessarily contribute to increased consumption or to improving nutrition unless people want to purchase the products and can afford to do so (Clay *et al*, 2005).

The level of awareness of the nutritive value of exotic vegetables and their contribution to balanced diet cannot be overemphasized. Thus, it becomes imperative to establish a priority list of these exotic vegetables to target research activities. The objectives of the study are to:

- Describe the socioeconomic characteristics of respondents.
- determine consumers' preference for these vegetables;
- determine the socioeconomic factor affecting the budget share of consumers on these vegetables.

METHODOLOGY

Study Area

The study was carried out in Oyo and Kano State of Nigeria between June to October, 2008. Oyo State is an inland state in south-western Nigeria(8°00'N 4°00'E / 8°N 4°E). According to population census of 2006 results, it has population of 5,591,589. The state consists of thirty three Local Government Areas. Kano State is located in North-Western Nigeria (11°30'N 8°30'E/11.5°N 8.5°E). According to 2006 population figure, the population figure of Kano is 9,383,682 (Wikipedia, 2010). There are 44 Local Government Areas (LGAs) in the state.

Method of sampling and data collection

Four local government areas namely Ibadan North, Ibadan North West, Ibadan South West and Iddo Local government areas were purposely selected from Oyo State. Also, from Kano State, Four local government areas were purposively selected in Kano state namely: Kano municipal, Nassarawa, Bebeji and Wudil local government areas. Twenty five consumers were randomly selected from each of the local government areas giving a total number of 200 respondents from Kano and Oyo State. Primary data were collected with the aid of structured questionnaire to capture the socioeconomic characteristics and their preference for the vegetables.

Analytical Technique

The data were analyzed using descriptive statistics which include frequency distribution and percentages. Others include multiple linear regression to identify the factors affecting the budget share of consumers on the exotic vegetables. The linear regression model is stated thus:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + u$$

Where

Y= Proportion of budget share on the vegetables.

X₁= Gender of respondents

X₂ = age of respondents (in years)

X₃ = marital status of respondents,

X₄= Educational level of respondents

X₅= Occupational level of respondents

X₆ = household income per month

a= constant,

b = the coefficient of the independent variable

Régression coefficient,

u= error term

RESULTS AND DISCUSSION

Socio economic characteristics of respondents

The socio economics characteristics of respondents are shown in Table 1. Most of the respondents from Oyo State are females (53.3%) while majority of respondents in Kano State are male (85%). This is attributed to the fact that males dominate marketing due to the cultural factor that encourage males to go out to purchase materials needs of the family. Most of the respondents were within 31 -40 years (38.35%). This may indicate a trend of generational taste and awareness of importance of vegetables in diet. Also, most of the respondents had tertiary level of education (80.85%) and married (69.15%).

Consumption pattern and preference for the vegetables

Based on the survey 35%, 25%, 17%, 16% and 7% of respondents consume watermelon, cabbage, cucumber, lettuce and spring onion respectively in Oyo State (Fig 1). As opposed to Kano State where 63.3% consume lettuce, 15% cabbage and the least consumption level was obtained with cucumber (5%). From the result of the consumers preference for the vegetables (Fig 2), most respondents preferred watermelon in Oyo State (64.7%). This was followed by cabbage (31.3%), cucumber (20%), lettuce (18%) and spring onion (16%) respectively. Also, for the preference for the vegetables in Kano State most of the respondents preferred lettuce (51.7%). This was followed by watermelon (43.3%) of the respondents. Cabbage, cucumber and spring onion were preferred by 28.3%, 18.3% and 18% of the respondents respectively. High levels of lettuce and cabbage consumption in Kano State reflect a traditional taste for vegetable salads in Northern Nigeria. Availability, low cost and ease of preparation were other factors influencing the levels of leafy vegetable consumption.

Consumer purchasing habit

From the result 59.3% of the respondents in Oyo State purchased their vegetables from the main market, 18% grocery, and 16.7% from hawkers while 6% bought from neighbourhood markets (Fig 3). For Kano, most of the respondents purchased their vegetables from the main market (68.3%). The highest percentage of respondents 44.3% spent less than #500, 20% spent #501-100, 25% spent #1001-1500 on the purchase of the vegetables and 10.7% spent between #1500-2000 in Oyo state. Similar trends were also observed in Kano State (Table 2). Generally, 71% of respondents agreed that their levels of income does not affect the consumption of the vegetables, indicating awareness of dietary importance and cultivated taste.

Factors affecting consumer preference

In order to determine the amount of money spent on these vegetables monthly, linear regression was employed. The results showed that in Oyo State, age and occupational level of respondents are the significant factors influencing the budget share on the consumption of these vegetables (Table 3). The possible relationship between occupational class and income may indicate affordability induced taste. Age may also be an important factor in this respect because younger people are expected to be more aware of the importance of the vegetables due to exposure to internet and trend literatures. On the other hand in Kano State (Table 4), there were no factors affecting the amount of money spent on the vegetables. This implies that the consumption of the vegetables cut across all the socioeconomic classes in the state.

CONCLUSION

This study has shown that consumers showed preference to exotic vegetables. In the following order: Watermelon > cabbage > cucumber > lettuce > spring onion in Oyo State. In Kano State, the preference is in the order lettuce>watermelon>cabbage>cucumber>spring onion. Considering the numerous importance of vegetables in the diet and established taste and consumption levels, it has become an imperative to improve on production techniques, processing, storage and marketing of these produce to sustain availability and affordability.

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Table 1: Socioeconomic characteristics of respondents

Characteristics		Oyo state	Kano state	Average
Sex	Male	46.7	85.0	65.85
	Female	53.3	15.0	34.15
	Total	100	100	100
Age (years)	Less than 20	1.0	5.0	3.0
	21-30	30.0	15.0	22.5
	31-40	35.0	41.7	38.35
	41-50	20	35.0	27.5
	51-60	11.0	1.7	6.35
	Above 60	3.0	1.7	2.35
	Total	100	100	100
Level of education	No formal education	5.0	1.7	3.35
	Primary	15.0	6.7	10.85
	Secondary	10.0	6.6	8.3
	Tertiary	75.0	86.7	80.85
	Total	100	100	100
Marital status	Single	25.0	28.3	26.65
	married	70.0	68.3	69.15
	divorced	5.0	3.4	4.2
	Total	100	100	100
Level of occupation	Civil servants	50.0	83.3	66.65
	Self employed	35.0	13.7	24.35
	Private companies	15.0	3.0	9.0
	Total	100	100	100

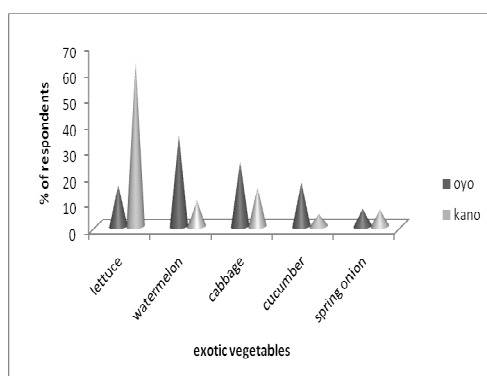


Figure 1: Consumption rate of exotic vegetables in Oyo and Kano State of Nigeria.

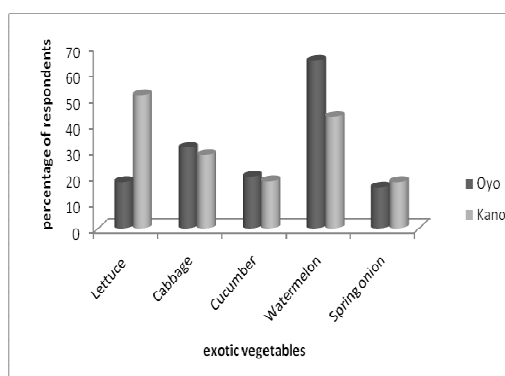


Figure 2: Preference for exotic vegetables in Oyo and Kano State of Nigeria.

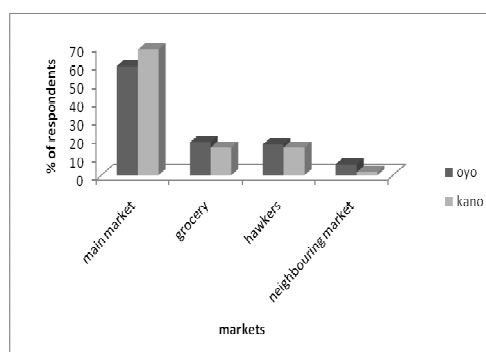


Figure 3: Markets of purchase of the vegetables.

Table 2: Proportion of income spent on vegetables

Income proportion	Percentage of respondents	
	Oyo state	Kano State
Less than N500	44.3	51.7
501-1000	20.0	35.0
1001-1500	25.0	11.7
1501-2000	10.7	1.7

Table 3 Result of the Regression analysis (Oyo State)

Variables	Coefficients	Standard error	T statistics
Constant	0.719	0.496	1.449
Gender of respondents	0.170	0.128	1.327
Age of respondents	-0.149	0.068	2.201*
Marital status of respondents	0.255	0.160	1.604
Educational level of respondents	0.101	0.103	0.978
Occupational level of respondents	0.147	0.064	2.315*
Household income per month	0.059	0.040	1.490

*significant at 5%

Table 4: Result of the Regression analysis (Kano State)

Variables	Coefficients	Standard error	T statistics
Constant	-0.114	0.718	-0.159
Gender of respondents	0.449	0.267	1.679
Age of respondents	0.072	0.147	0.488
Marital status of respondents	0.157	0.277	0.569
Educational level of respondents	0.248	0.179	1.388
Occupational level of respondents	-0.087	0.111	-0.784
Household income per month	0.073	0.090	0.807

*significant at 5%

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